

AUG 5 - 1954

DATE

8/2/54

REFERENCE SLIP

REFERRED TO

Dr Bushland

- | | |
|--|---|
| ☐ Action. | ☐ Note and file. |
| ☐ Approval. | ☐ Per telephone call. |
| ☐ Attention. | ☐ Previous correspondence. |
| ☐ Comment. | ☐ Recommendation. |
| ☐ Consideration. | ☐ Record. |
| ☐ Copying. | ☐ Rush. |
| ☐ Correction. | ☐ Reply for signature of , |
| ☐ Filing. | ----- |
| ☐ Initials. | ☐ See me. |
| ☐ Investigate and advise. | ☐ Signature. |
| ☐ Memorandum. | ☐ To be rewritten. |
| ☐ Note and forward. | ☐ For your information. |
| ☐ Note and return. | |

REMARKS:

Mr. Bitter would also like a copy of the quarterly reports. I failed to include his name with the workers in the project - I assume he should have been included.

Al

(Name of sender)

AUG 5 - 1954

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch
Postbox 85, Curacao, N.A.

August 2, 1954

To: Dr. R. C. Bushland
From: A.H. Baumhover
Subject: Weekly report - Curacao

EGG MASS COLLECTION DATA													
Number of fertile and sterile egg masses at goat pens													
Date	1	2	3	4	5	10	6	7	8	9	11	Total	
	F S	F S	F S	F S	F S	F S	F S	F S	F S	F S	F S	F S	F S
7/26	0 2	0 0	5 1	2 3	0 1	0 0	0 7	0 0	0 0	1 1	1 2	2 3	
27	0 0	0 0	4 0	0 0	0 0	0 0	4 0	0 0	1 0	3 0	2 2	6 3	
28	2 0	0 0	1 1	0 1	0 0	1 0	4 2	1 0	1 0	1 0	1 1	3 5	
29	2 0	0 0	2 1	0 0	0 0	0 0	4 1	1 0	2 0	0 0	0 3	3 3	
30	0 1	0 0	5 0	3 0	0 0	0 0	8 1	0 1	0 2	2 1	2 2	4 7	
31	3 0	0 0	4 1	1 2	0 0	0 0	8 3	1 0	0 0	1 0	0 3	2 5	
8/1	1 2	0 1	1 0	0 1	0 1	1 0	3 5	2 3	1 0	1 1	2 3	6 7	
Total	8 5	0 1	22 4	6 7	0 2	2 0	38 19	5 6	4 4	9 3	8 16	26 33	

Sterility - 56%

STERILE MALES RELEASED

24,115
28,340

Mr. Bitter agrees with me that it may be desirable to submit a progress report to the governor summarizing the results to date, or perhaps send him a copy of the quarterly reports. During the coming months perhaps a monthly report could be sent. If you agree should the reports be sent from Kerrville or Washington rather than from here?

As mentioned previously I feel that the possibility exists that continuous operation of a goat pen in a locality may significantly reduce the immediate population. To check this point I would favor the establishment for several weeks, 2 or 3 temporary pens as far as possible from existing pens. Additional goats purchased for these pens could be used to restock the original pens at the conclusion of this spot check.

cc: A.W. Lindquist, A.J. Graham, G.W. Eddy

A.H. Baumhover

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CEZARILEA SELAM ELLIPTIS

33 - Yttrium

15/1

In and - Curacao

AGRICULTURAL RESEARCH SERVICE
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Entomology Research Branch
P. O. Box 232
Kerrville, Texas

August 6, 1954

To: A. H. Baumhover, Postbox 85, Willemstad, Curacao,
Dutch West Indies

From: R. C. Bushland, Entomologist in Charge

Subject: Reports

I have your weekly report of August 2 with which you included a note requesting a copy of our quarterly report for Mr. Bitter. An extra report for Mr. Bitter is being sent to Mr. Graham at Orlando today and he can put it in the next fly shipment.

I also note your statement in the paragraph following the tabular data that Mr. Bitter agrees with you that it may be desirable to send a progress report to the Governor of Curacao. I hope that this is just your idea because what you propose involves a lot of trouble which I do not want to take on. In order for our organization to submit a report it would have to go through channels. You definitely cannot send reports from Curacao. The report of your survey last year was sent to the Governor by the Chief of the Bureau. Since the reorganization the channels would be somewhat different and I assume that any report would have to be sent through the Director of Crops Research. At any rate there would be a lot of difficulty for Drs. Knipling, Lindquist and me. Unless the Governor has asked for a report (which you do not indicate) I am very much opposed to the proposal of a current progress report and future monthly reports to the Governor.

If the Governor or any of Mr. Bitter's superiors wish to know about the progress of the work I would much prefer that Mr. Bitter give them the necessary information. He not only has first-hand contact with the work but has all of the records at his disposal and I think that it would be entirely proper for him to inform his superiors of how the cooperative work is going since he is giving all of his time to it.

cc: A. W. Lindquist

UNITED STATES DEPARTMENT OF AGRICULTURE

Agricultural Research Service

Entomology Research Branch

AUG 12 1954

Postbox 85
Curacao, N.A.

To: Dr. R. C. Bushland
From: A.H. Baumhover
Subject: Weekly report - Curacao

EGG MASS COLLECTION DATA

Date	1		2		3		4		5		10		Total		6		7		8		9		11		Total	
	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S
8/2	2	0	0	0	3	0	2	1	0	1	0	0	7	2	1	1	0	0	0	0	1	0	1	1	3	2
3	3	0	0	0	3	2	1	1	0	0	0	0	7	3	1	1	0	0	0	0	1	0	1	0	3	1
4	2	1	0	0	0	0	3	1	0	0	0	0	5	2	0	3	0	0	1	0	0	0	0	0	1	3
5	3	2	0	0	1	0	1	1	0	0	0	0	5	3	0	1	1	0	0	2	0	2	1	0	2	5
6	3	0	0	0	2	2	5	0	0	0	0	0	10	2	0	0	0	0	1	1	0	0	0	0	1	1
7	1	0	0	0	1	1	1	1	0	1	0	0	3	3	0	0	0	0	1	1	1	1	0	1	2	3
8	2	0	0	0	1	0	3	0	0	0	0	0	6	2	1	0	0	0	1	1	0	0	0	0	2	1
Total 16	3	0	2	1	1	5	16	5	30	21	0	0	43	15	3	6	1	0	4	5	3	3	3	2	14	16
																								53%		

STERILE MALES RELEASED

3,480
22,200
153,265
450

4,060
4,200

36,345

Total released 7/12-8/7 (4 weeks)

Average number/sq.mi./wk.

107

Sterility 26%

AUG 12 1954

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

Postbox 85
Curaçao, N.A.

To: Dr. R. C. Bushland
From: A.H. Baarsma
Subject: Weekly report - Curaçao

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003.28
083.231
084

080.4
003.4
083.231
084

101
243.23
(243.23) 1/8-22/1
1/8
2/8

AGRICULTURAL RESEARCH SERVICE

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	%
8/1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AGRICULTURAL RESEARCH SERVICE

AUG 12 1954

Since the life cycle of the screw-worm here may be as short as $2\frac{1}{2}$ weeks a reduction in the population of the area treated at the 400 (450) rate might be expected now. A reduction is indicated by a comparison of the egg masses collected the past 3 weeks on the 2 halves of the island:

Date	Total Number of Egg Masses	
	100 rate (6pens)	400 rate (5 pens)
7/19-25	63	80
7/26-8/1	57	59
8/2-8	58	31

Following is a comparison of the data of the past 20 days with previous data during the 5000r vs. 7500r test (obtained from pens 1,2,3,4,5 and 10):

	5000r vs. 7500r test	Data from 7/20-8/8
Average number of masses per pen per day	2.33	1.40
Estimated natural population density per sq.mi. (both sexes)	128	77
Estimated sterile male population density per sq.mi.	198	107
Theoretical sterility	60%	74%
Actual sterility	22%	28%
Efficiency	37%	38%

This indirect comparison does not indicate any benefit from the pre-release feeding of honey. However, if release of the flies was delayed, feeding before release would undoubtedly be important. Mr. Bitter reports that in a bee hive recently tended by him 1 super was completely filled in 3 weeks, indicating an abundance of nectar. However, feeding the flies here takes only a few minutes; the greatest saving in discontinuing the feeding would be the time saved at Orlando in preparing the sacks with the screened bottoms. However, it may be too early to make a decision.

We have had no difficulties the past month obtaining a pilot when the flies were ready to be released, and with the heavier Fairchild plane back in operation wind should not be a factor in interfering with release of the flies.

cc: A.W. Lindquist
A.J. Graham
G.W. Eddy

A. H. Baumhauer

Since the life cycle of the saw-worm here may be as short as 2 1/2 weeks a reduction in the population of the area treated at the 400 (450) rate might be expected now. A reduction is indicated by a comparison of the egg masses collected the past 3 weeks on the 2 halves of the island:

Date	100 rate (6pens)	400 rate (5 pens)	Total Number of Egg Masses
7/19-25	63	80	
7/26-8/1	57	59	
8/2-8	58	31	

Following is a comparison of the data of the past 30 days with previous data during the 5000r vs. 7500r test (obtained from pens 1, 2, 3, 4, 5 and 10):

Efficiency	Actual sterility	Theoretical sterility	Estimated sterile male population density per sq. mi.	Estimated natural population density per sq. mi. (both sexes)	Average number of masses per pen per day
38%	37%	60%	138	128	2.88
38%	38%	74%	107	77	1.40
7500r test	7/20-8/8	7/20-8/8	7/20-8/8	7/20-8/8	7/20-8/8
5000r vs.	7/20-8/8	7/20-8/8	7/20-8/8	7/20-8/8	7/20-8/8

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cc: A.W. Lindquist
A.J. Graham
G.W. Rddy

A. V. Bannister

Sw Crad - Curacao

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

Postbox 85
Curacao, N.A.

80/
AUG 16 1954

August 12, 1954

To: Dr. R. C. Bushland

From: A.H. Baumhover

Subject: Reports

Reference is made to your reply of August 6, 1954 regarding my suggestion that a formal report or reports be made to the governor of Curacao.

Neither the governor or other officials here have made a recent request for information regarding the progress of the experiment. However, when contacts were made at the outset of the program here in February and March the governor and other officials requested that they be kept informed of the progress of the project. Because of these requests and the considerable help being provided by the Curacao government both Mr. Bitter and myself felt that they were entitled to a formal report periodically. As I see it, it is not a question of whether the governor has or has not made a request for a formal report, but the propriety and possibility of making the report or reports.

However, since you prefer to handle the matter in an informal way Mr. Bitter will supply the necessary information in discussion with his superiors.

cc: A. W. Lindquist

A. H. Baumhover

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

Postbox 85
Curaçao, N.A.

August 12, 1954

To: Dr. R. C. Bushland

From: A.H. Baumhover

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cc: A. W. Lindquist

A. H. Baumhover

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

Postbox 85, Curacao, N.A.

August 16, 1954

To: Dr. R. C. Bushland
From: A. H. Baumhover
Subject: Weekly report - Curacao

EGG MASS COLLECTION DATA
Number of fertile and sterile masses at goat pens

Date	1		2		3		4		5		10		Total		6		7		8		9		11		Total	
	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S
8/9	0	0	0	0	0	0	2	1	0	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	1
10	1	0	0	1	0	0	1	1	0	0	0	0	2	2	1	1	0	0	0	2	0	1	1	0	2	4
11	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1
12	0	0	0	1	1	3	0	0	0	0	0	0	1	4	1	2	0	2	0	0	1	0	1	0	1	6
13	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	1	0	2	0	0	0	0	0	0	0	5
14	0	1	0	0	1	0	0	1	0	0	0	1	1	3	0	0	0	0	1	0	0	0	1	0	0	2
15	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	0	0	2	1
Total	1	1	1	0	2	4	7	3	3	0	1	1	9	14	4	5	0	4	1	4	0	3	1	4	6	20

Sterility

61%

FLIES RELEASED (sterile males)

8/10-11 29,800
8/13-14 53,700

cc: A. W. Lindquist
A. J. Graham
G. W. Eddy

A. H. Baumhover

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 08-28-2001 BY 60322 UCBAW

Subject: Weekly report - Curacao
From: A. H. Baumhover
To: Dr. R. C. Bushland

Postbox 85, Curacao, N.A.

August 18, 1884

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

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cc: A. W. Lindquist
A. J. Graham
G. W. Eddy

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Sw Fred - Curacao

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AGRICULTURAL RESEARCH SERVICE

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Entomology Research Branch
P. O. Box 232
Kerrville, Texas

August 19, 1954

AIR MAIL

To: A. H. Baumhover, Postbox 85, Willemstad, Curacao, D.W.I.

From: R. C. Bushland, Kerrville, Texas

Subject: Curacao Experiment

I was pleased to receive your weekly report of August 16 and note that egg mass numbers have declined and sterility has increased. I suppose that you and Dr. Lindquist have discussed some of the points that I will bring up in this letter, but just in case you have not settled some of them I wish to offer some suggestions.

Egg masses now seem to be so few that it will be necessary for you to egg flies from a laboratory colony in order to be sure of adequate numbers for infesting goats. As long as you continue to record appreciable numbers of egg masses laid by wild flies in the field, it will be safe to maintain caged adults at Willemstad. However, when the flies decline still further so that you are collecting less than the total of five egg masses per week, I think that you should do away with a laboratory colony of normal flies. When the normal population is reduced to only 10 percent of its present density, as indicated by egg mass collections, the population may be so close to extinction that serious harm could come from the accidental escape of one or two normal flies from the laboratory colony.

I think you had better be prepared to get eggs from Orlando and Mr. Graham might well start shipping them now so that you will have a little practice in transporting them before they are urgently needed. I think that Mr. Graham should put about ten egg masses to a pill box, wrapping fresh eggs with damp filter paper just before mailing them. I think that you should try making air letter mail shipments and including egg masses in your regular air freight shipments of sterilized pupae. Orlando will also need to check the relative merits of packing egg masses by themselves in damp filter paper and adding a small piece

AGRICULTURAL RESEARCH SERVICE

Entomology Research Branch
P. O. Box 232
Kerrville, Texas

August 19, 1954

AIR MAIL

To: A. H. Baumhauer, Postbox 66, Willemstad, Curacao, D.W.I.

From: R. G. Bushland, Kerrville, Texas

Subject: Curacao Experiment

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Egg masses now seem to be so few that it will be necessary for you to egg flies from a laboratory colony in order to be sure of adequate numbers for infesting hosts. As long as you continue to record approximate numbers of egg masses laid by wild flies in the field, it will be safe to maintain caged adults at Willemstad. However, when the flies decline still further so that you are collecting less than the total of five egg masses per week, I think that you should do away with a laboratory colony of normal flies. When the normal population is reduced to only 10 percent of its present density, as indicated by egg mass collections, the population may be so close to extinction that serious harm could come from the accidental escape of one or two normal flies from the laboratory colony.

I think you had better be prepared to get eggs from Orlando and Mr. Graham might well start shipping them now so that you will have a little practice in transporting them before they are urgently needed. I think that Mr. Graham should put about ten egg masses in a pill box, wrapping fresh eggs with damp filter paper just before mailing them. I think that you should try making air freight shipments of sterilized including egg masses in your regular air freight shipments of sterilized pupae. Orlando will also need to check the relative merits of packing egg masses by themselves in damp filter paper and adding a small piece

2-A.H.Baumhover-8/19/54

of fresh lean beef to serve as food for the larvae that hatch en route. I do not think the meat will be necessary, but you had better try both methods of shipment.

You will recall when I visited you in Curacao we discussed the need for a special locked goat pen on the laboratory grounds or at the abattoir, where all goats would be infested. As I recall the plan, we agreed that two goats would be brought in from each pen each week and infested with larvae shipped from Orlando. The infested goats would be kept in the pen until the larvae were 2-1/2 to 3 days old, when the larvae would be killed out with benzol. Everything would be double checked to make certain that no larvae attained such size that they could develop into flies. After killing out the larvae, the wounded goats would be transported back to their respective goat pens in the field where it was assumed that they would remain attractive to flies for about a week.

As I remember it, Mr. Bitter thought that he could get the carpenters already employed by the Colonial Administration to build this special goat pen. If this has not worked out, perhaps you and Mr. New could hire someone to assist you and build the pen yourselves. I talked over the matter with Mr. Poeske and he said that it will be all right to spend up to \$200.00 on an escape-proof goat pen if necessary. Since the structure will have to be abandoned at the end of the experiment we would prefer that Mr. Bitter's organization build it if that can be arranged, but if it is not convenient for them to do so you may build it, limiting the expenditure of funds as much as possible.

I think that you should go ahead with the construction of the locked goat pen and infestation of those goats with screw-worms shipped as eggs from Orlando immediately so that if there are any flaws in our plan, you can discover them while it is still possible to obtain some hatchable eggs in nature and thus maintain the continuity of records.

I recognize that goats handled as suggested above will be less attractive to ovipositing flies than those bearing wounds actually infested with living larvae. The wounds being less attractive may not get as many egg masses as they would with living larvae, and this will introduce another error into our population estimates. However, sooner or later we have to quit exposing infested goats in our field goat pens and I think that it might well be now.

NOTE TO DR. LINDQUIST: If I have proposed anything in this letter that is contrary to plans agreed upon by you and Mr. Baumhover, would you please advise Mr. Baumhover by cablegram to disregard those parts of the above instructions which you consider inferior to any settled course of action.

cc: A.W.Lindquist
A.J.Graham.

of fresh farm beef to serve as food for the larvae that hatch en route. I do not think the meat will be necessary, but you had better try both methods of shipment.

You will recall when I visited you in Curacao we discussed the need for a special looking goat pen on the laboratory grounds or at the apartment. Where all goats would be interested. As I recall the plan, we agreed that two goats would be brought in from each pen each week and interest with larvae shipped from Curacao. The interested goats would be kept in the pen until the larvae were 2-1/2 to 3 days old, when the larvae would be killed out with benzol. Everything would be double checked to make certain that no larvae remained such as they could develop into flies. After killing out the larvae, the wounded goats would be transported back to their respective goat pens in the field where it was assumed that they would remain attractive to flies for about a week.

As I remember it, Mr. Bitter thought that he could get the carpenter already employed by the Colonial Administration to build this special goat pen. It was not worked out, perhaps you and Mr. Bitter could hire someone to assist you and build the pen yourselves. I talked over the matter with Mr. Bitter and he said that it will be all right to spend up to \$200.00 on an escape-proof goat pen if necessary. Since the structure will have to be abandoned at the end of the experiment we would prefer that Mr. Bitter's organization build it if that can be arranged, but if it is not convenient for them to do so you may build it, limiting the expenditure of funds as much as possible.

I think that you should go ahead with the construction of the looked goat pen and liberation of those goats with larvae which shipped as eggs from Curacao immediately as that if there are any flies in our plan, you can discover them while it is still possible to obtain some reliable eggs in nature and thus maintain the continuity of records.

I recognize that goats handled as suggested above will be less attractive to ovipositing flies than those bearing wounds actually infested with living larvae. The wounds being less attractive may not get as many eggs as they would with living larvae, and this will introduce another error into our population estimates. However, sooner or later we have to quit exposing infested goats in our field goat pens and I think that it might well be now.

NOTE TO DR. LINDQUIST: If I have proposed anything in this letter that is contrary to plans agreed upon by you and Mr. Baumhauer, would you please advise Mr. Baumhauer by cablegram or disregard those parts of the above instructions which you consider inferior to any settled course of action.

cc: A.W.Lindquist
A.J.Graham

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

AUG 26 1954

Postbox 85, Curacao, N. A.

August 23, 1954

To: Dr. R. C. Bushland

From: A. H. Baumhover

Subject: Weekly report - Curacao

Data on egg mass collections and flies released are contained in the attached tabulation.

In view of the marked decrease in egg mass collections from the upper end of the island where the 400 rate is going into the 7th week we are making arrangements for a security pen to be built near our laboratory. This pen will be enclosed on all sides (including the top) and the opening secured with a padlock. It is our intention to routinely return 2 goats from each pen for infesting and holding in the security pen for 3 to 4 days while the larvae develop. After being certain that no viable larvae remain in the wound the goats will be returned to the various pen locations. By leaving all the goats, except those to be infested, at the various pen locations it is hoped that the system will not vary significantly from the previous method. The primary difference will be the absence of active wounds, but it is our experience that 50 to 75% of the egg masses collected are obtained from wounds in the process of healing.

Since the initiation of the 400 rate on the lower end of the island, where the pens are checked by Mr. Bitter and myself, we have frequently observed 2 to 3 female screw-worm flies feeding on the wounds and probing with their ovipositors as though attempting to lay. This is in contrast to the previous period, where, particularly at pens 4, 5, and 10 where the collections have been light, screw-worm flies were seldom seen visiting the pens. Since these flies appear smaller than the flies actually observed to oviposit, the conclusion is that these flies are probably released, sterile females. In addition the fly trap which we have continued to operate catches primarily small screw-worm females. In a later report we will include a tabulation of the fly catches.

As you will note in the tabular data we have established one additional pen. This is No. 12 at Ronde Klip, midway between existing pens 3 and 4. Today a pen has been established at Barber, midway between pens 6 and 9 and within 2 or 3 days a pen will be established at Newport, approximately 3 miles south-east of existing pen 5.

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

Postbox 85, Curacao, N. A.

August 23, 1954

To: Dr. R. C. Bushland

From: A. H. Bamhaver

Subject: Weekly report - Curacao

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Since we can no longer be certain of sufficient larvae for the infestation of the gaats I have requested Mr. Graham to send us a shipment of larvae twice weekly. The first shipment, received last week came through very well, except that only 30% of the eggs hatched. Meat was provided for the hatched larvae and the larvae feeding on it appeared strong and healthy. I have no explanation for the poor hatch, except that temperatures in the baggage compartment may have been too cold. I would like to have them try, in addition to recently laid eggs, a shipment of newly hatched larvae established in regular screw-worm medium.

A. H. Baumhouse

cc: A. W. Lindquist
A. J. Graham
G. W. Eddy

August 23, 1954

R.C. Bushland

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R.C. Bushland

cc: A.W. Lindquist
A.J. Graham
G.W. Eddy

EGG MASS COLLECTION DATA
Number of fertile and sterile masses at goat pens

	1		2		3		4		5		10		Total		6		7		8		9		11		Total		12 1/		
Date	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	
8/16	0	0	0	0	0	2	0	2	0	0	0	0	0	4	2	0	0	0	0	3	0	0	1	1	0	6	1	-	-
17	0	0	0	0	1	2	0	0	0	0	0	3	1	5	1	3	0	0	0	1	0	0	1	2	2	6	-	-	
18	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	2	0	1	4	
19	0	2	0	0	0	1	0	0	0	0	0	1	0	4	0	0	0	0	0	1	0	0	0	0	0	1	1	1	
20	0	1	0	0	0	1	0	2	0	0	0	0	0	4	0	1	0	1	0	0	1	0	1	0	2	2	0	0	
21	0	2	0	0	0	0	1	3	1	1	0	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
22	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>1</u>	
Total	0	5	0	0	1	6	2	9	1	1	0	4	4	25	3	5	0	1	4	2	2	1	4	4	13	13	4	7	

Sterility

86%

50%

Sterile Males Released

8/18 - 12,680

8/21 - 26,800

8/31 - 82'800
 8/18 - 13'880

Sterile Males Released

Date	Sterility										86%		80%	
	F	S	F	S	F	S	F	S	F	S	Total	F	Total	F
8/18	0	0	0	0	0	0	0	0	0	0	0	0	0	-
19	0	0	0	0	0	0	0	0	0	0	0	0	0	-
20	0	0	0	0	0	0	0	0	0	0	0	0	0	-
21	0	0	0	0	0	0	0	0	0	0	0	0	0	-
22	0	0	0	0	0	0	0	0	0	0	0	0	0	-
23	0	0	0	0	0	0	0	0	0	0	0	0	0	-
24	0	0	0	0	0	0	0	0	0	0	0	0	0	-
25	0	0	0	0	0	0	0	0	0	0	0	0	0	-
26	0	0	0	0	0	0	0	0	0	0	0	0	0	-
27	0	0	0	0	0	0	0	0	0	0	0	0	0	-
28	0	0	0	0	0	0	0	0	0	0	0	0	0	-
29	0	0	0	0	0	0	0	0	0	0	0	0	0	-
30	0	0	0	0	0	0	0	0	0	0	0	0	0	-
31	0	0	0	0	0	0	0	0	0	0	0	0	0	-
8/18	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	-

Number of fertile and sterile masses at each time
 Egg mass collection data

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

To: R. C. Bushland
From: A. H. Baumhauer
Subject: Weekly report-Curacao

Postbox 85, Curacao, N. A.

August 30, 1954

EGG MASS COLLECTION DATA

Number of fertile and sterile egg masses collected at goat pens

Date	1		2		3		4		5		10		Total		6		7		8		9		11		Total	
	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S
8/23	2	3	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	2	1	1	1	0	1	3	3
24	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	1	0	0	1	2
25	0	1	0	1	1	0	0	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	1	1	2	1
26	0	0	0	0	0	0	1	1	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	1	0	1
27	1	4	0	1	0	0	0	0	0	1	0	0	1	6	0	0	0	0	0	1	0	0	1	0	1	1
28	0	3	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	2	1	1	1	3	2
29	<u>1</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>3</u>
Total	4	16	0	4	1	0	1	1	0	2	0	0	6	23	0	0	0	0	5	3	3	4	3	6	11	13

Weekly average per pen-4.8 masses; sterility 80% Weekly average per pen 4.8 masses; sterility 54%

	12		13		14	
	F	S	F	S	F	S
23	0	1	-	-	0	1
24	0	1	-	-	1	2
25	0	2	-	-	0	0
26	0	0	0	0	3	2
27	0	0	0	1	1	2
28	0	0	0	0	0	1
29	<u>0</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>
Total	0	7	0	1	5	10

sterile males released 31780

#12--At Barber, midway between #6 and #9.

#13--At Ronde Klip, midway between #3 and #4.

#14--Three miles southeast of #5.

cc: A. W. Lindquist
A. J. Graham
G. W. Eddy

A. H. Baumhauer

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Entomology Research Branch

August 30, 1954

Postbox 85, Curacao, N. A.

To: R. C. Bushland
From: A. H. Baumhauer
Subject: Weekly report-Curacao

Weekly average per day 8.4-8.4 masser; asterilized per day 8.4-8.4 masser; asterilized

08/13 22/11/54 21/11/54

6# and 3# between 21-21#

4# and 3# between 21-21#

3# and 2# between 21-21#

cc: W. A. A.
l. A. A.
G. W. Eddy

etad	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
etad	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

A. H. Baumhauer